

CLAIMS

1. A peripheral blood miRNA marker combination for diagnosing gastric cancer, comprising at least five miRNA markers selected from: hsa-miR-29c-3p, hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-93-5p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p, hsa-miR-30e-5p, hsa-miR-142-5p, hsa-miR-126-3p, hsa-miR-183-5p and hsa-miR-340-5p.

2. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-29c-3p, hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-93-5p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p, hsa-miR-30e-5p, hsa-miR-142-5p, hsa-miR-126-3p, hsa-miR-183-5p and hsa-miR-340-5p.

3. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-29c-3p, hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-93-5p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p, hsa-miR-30e-5p, hsa-miR-126-3p, hsa-miR-183-5p and hsa-miR-340-5p.

4. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-93-5p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p, hsa-miR-30e-5p, hsa-miR-126-3p, hsa-miR-183-5p and hsa-miR-340-5p.

5. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p, hsa-miR-30e-5p, hsa-miR-126-3p, hsa-miR-183-5p and hsa-miR-340-5p.

6. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p, hsa-miR-30e-5p, hsa-miR-126-3p and hsa-miR-340-5p.

7. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p, hsa-miR-30e-5p and hsa-miR-340-5p.

8. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-424-5p, hsa-miR-103a-3p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p and hsa-miR-340-5p.

9. The miRNA marker combination according to claim 1, wherein the miRNA marker combination consists of hsa-miR-103a-3p, hsa-miR-181a-5p, hsa-miR-21-5p, hsa-miR-140-5p and hsa-miR-340-5p.

10. A method for identifying a subject at risk of suffering from gastric cancer, comprising:

a. detecting the expression level of the miRNA marker combination according to claim 1 in the subject's peripheral blood sample,

b. calculating and correcting the risk score of the subject with the non-cancer control sample as a reference, and

c. determining the possibility of the subject suffering from gastric cancer based on the risk score.

11. The method according to claim 10, wherein a linear regression model is used to calculate the risk score.

12. The method according to claim 11, wherein the linear regression model is calculated as follows:

$$\text{Logistic} = (K_{\text{miRNA1}} * Ct_{\text{miRNA1}}) + (K_{\text{miRNA2}} * Ct_{\text{miRNA2}}) + (K_{\text{miRNA3}} * Ct_{\text{miRNA3}}) + \dots + \text{Constant}$$

wherein miRNA1, miRNA2, miRNA3... are selected from the miRNA marker combination according to claim 1; Ct is the relative expression level of each miRNA detected by qPCR; and K is the coefficient of each miRNA marker.

13. The method according to claim 10, wherein the method comprises a qPCR method, a chip method or a sequencing method for detecting the miRNA marker.

14. A kit for diagnosing gastric cancer, comprising a reagent for specifically detecting the miRNA marker combination according to claim 1.

15. The kit according to claim 14, wherein the reagent comprises at least one oligonucleotide,

wherein at least a part of the oligonucleotide specifically binds to the miRNA marker according to claim 1.

16. The kit according to claim 15, wherein the kit comprises a stem-loop reverse transcription primer and/or a semi-nested qPCR primer for amplifying the miRNA marker according to claim 1.